Exotic Plant Inventory and Mapping

Introduction

The intent of the Shenandoah National Park's exotic plant survey is to provide parkwide information on the status of exotics and the general health of native stands. As a stand-alone survey method, its intent is to provide data on exotic infestation centers for operations planning, treatment monitoring, and population trends.

Management Needs

Improved understanding of exotic plant presence and distribution is imperative to understand the degree of threat to native species and communities, to understand the biogeography of the exotic plants themselves, and to develop strategies for controlling the invasion of these species. Exotic plants replace native plants and can adversely affect associated animal life. These shifts are undesirable from a biodiversity perspective. Although some exotic plants function as equivalent surrogates for native species, ecosystem function and character can change inappropriately as exotic plants expand.

Tree of heaven (scattered throughout the park).

Current Procedures

The Shenandoah National Park exotic plant survey focuses on specific geographical areas likely to be infested. Such areas included: current Park developments, road access, Park boundaries, abandoned historical developments, and areas impacted by natural and human- caused disturbance.

- FY 1997/98: Conducted survey of current developed areas
- FY 1998/2000: Conducted survey along wildfire access roads; released the first data analysis of all survey information to date
- FY 2003: Conducted survey along the 350+ miles of Park boundary; released preliminary analysis of those findings
- FY 2004: Conducted survey of 10% of known abandoned historical developments; released preliminary analysis of those findings

What We Have Learned

Maps and a database of the information obtained as a result of these field surveys have been developed. Preliminary analysis of these has provided the following findings:

Penetration: Invasives penetrate about 75- m from Skyline Drive into high- forest areas and 102- m from abandoned developments. Garlic mustard and Japanese stiltgrass are the most problematic invaders.

Geography: The North District is the most infested district. Generally, the east is more infested than the west. Skyline Drive, large abandoned develop- ments and fire roads are infestation centers; Park boundaries are not.

Predominate Species:

- Trees: Tree of heaven is the most prevailant exotic tree. Princess tree could become a problem
- Shrubs: Oriental bittersweet, multiflora rose, wineberry, Japanese honeysuckle, and Japanese barberry are the most common shrubs
- Herbs: Garlic mustard, Oriental lady's thumb, and Japanese stiltgrass are the most common forb species

Exotic Plant Inventory and Mapping (continued...)

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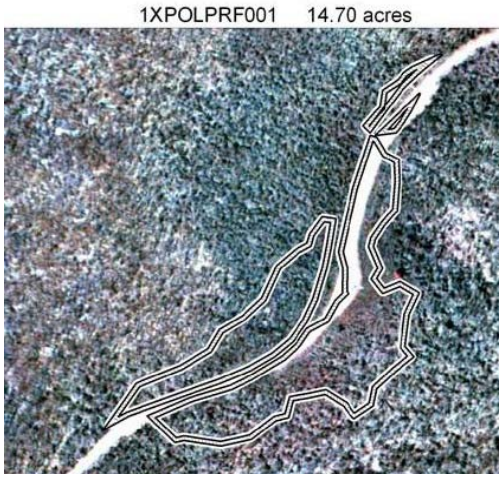

Mile-a-Minute Weed - Hogwallow Flats Overlook site map.